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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,836	01/13/2006	Nigel P Robinson	020540	8682
23596 7590 01/15/2009 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121				
EXAMINER ANWAR, MOHAMMAD S				
ART UNIT 2416		PAPER NUMBER		
NOTIFICATION DATE 01/15/2009		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/537,836

Applicant(s)

ROBINSON ET AL.

Examiner

MOHAMMAD ANWAR

Art Unit

2416

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-13, 15-21, 23-29, 31 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-13, 15-21, 23-29, 31 and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Final Drawing Review (PTO-849)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 11/19/08 have been fully considered but they are not persuasive. Below see a detailed response to applicant arguments.

Independent claim 1 recites a data transfer procedure for transferring data of a data sequence between a transmitting entity and a receiving entity (see Le et al. column 5 lines 10-12 which shows transmitting a sequence of data packets), which entities each comprise a higher data handling layer and a lower data handling layer (see Le et al. column 8 lines 52-56), the procedure including at least the following combination of features: "sending a confirmation of receipt of the at least one of the plurality of segments from the lower data handling layer of the transmitting entity to the higher data handling layer of the transmitting entity based on the acknowledgement (see Le et al. mention acknowledgement of receipt in column 6 lines 12-16) ; wherein the higher data handling layer of the transmitting entity is arranged to retain the data unit until such time as an at least implied acknowledgement of receipt of earlier segments in the sequence is received from the receiving entity by the lower data handling layer of the transmitting entity (see Miklos column 4 lines 47-49); determining by the higher data handling layer of the transmitting entity that an earlier segment relative to the at least one of the plurality of segments in the sequence is not confirmed as being received by the receiving entity and retransmitting, based on the determining, the entire data unit via a second transmission link between the transmitting entity and the receiving entity."(see Miklos of storing and discarding based on the receipt of confirmation from the receiver

see Figure 4, column 6 lines 1-16, column 6 lines 1-16 where Miklos talks about sending the entire PDU).

Le discloses "a retransmission scheme for data packets for which an acknowledgment of receipt was not received at the transmitter. However, Le .fails to disclose or suggest "determining by the higher data handling layer of the transmitting entity that an earlier segment relative to the at least one of the plurality of segments in the sequence is not confirmed as being received by the receiving entity; and retransmitting, based on the determining, the entire data unit via a second transmission link between the transmitting entity and the receiving entity," as recited in amended claim 1. In contrast, Le discloses retransmitting the data that was "not acknowledged," not "the entire data unit," as recited in claim 1. (Le et al. disclose retransmission of missing data and Miklos disclose sending the whole PDU see column 6 lines 1-18). Therefore, the argument is not persuasive and the rejections hold. Please also see below the new ground of rejection using as necessitated by the amended claims.

2. Drawing objections and other claim objections are withdrawn based on the amended claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims are rejected under 35 U.S.C. 103(a) as being unpatentable over Le et al. (U.S. Patent No. 7,02,8094) in view of Miklos (U.S. patent No. 6,621,796).

For claims 1, 9, 17 and 25, Le et al. disclose a data transfer procedure for transferring data of a data sequence between a transmitting entity and a receiving entity (see column 5 lines 10-12), which entities each comprise a higher data handling layer and a lower data handling layer (see column 8 lines 52-56), the procedure comprising: transferring down from the higher data handling layer of the transmitting entity to the lower data handling layer of the transmitting entity a data unit of the data sequence (see

column 4 lines 16-18, line 29). Le et al. disclose all the subject matter but fails to mention which data unit comprises a plurality of segments each having a respective position in the data_unit, transmitting via a first transmission link between .the transmitting entity and the receiving entity each of the plurality of segments from the lower data handling layer of the transmitting entity to the lower data handling of the receiving entity; receiving an acknowledgement of receipt of at least one of the plurality of_segments from the lower data handling layer of the receiving entity at the lower data handling layer of the. transmitting entity, sending a confirmation of receipt of the at least one of the plurality of segments from the lower data handling layer of the transmitting entity to the higher data handling layer of the transmitting entity based on the acknowledgement; wherein the higher data handling layer of the transmitting entity is arranged to retain the data unit until such time as an at least implied acknowledgement of receipt of earlier segments in the sequence is received from the receiving entity by the lower data handling layer of the transmitting entity, "determining by the higher data handling layer of the transmitting entity that an earlier segment relative to the at least one of the plurality of segments in the sequence is not confirmed as being received by the receiving entity and retransmitting, based on the determining the entire data unit via a second transmission link between the transmitting entity and the receiving entity. However, Miklos from a similar field of endeavor disclose_which data unit comprises a plurality of segments each having a respective position in the data unit (see column 3 lines 38-42); transmitting via a first transmission link between .the transmitting entity and the receiving entity each of the plurality of segments from the lower data handling layer

of the transmitting entity to the lower data handling of the receiving entity (see column 3 lines 37- 42; column 4 lines 44-48); receiving an acknowledgement of receipt of at least one of the plurality of segments from the lower data handling layer of the receiving entity at the lower data handling layer of the transmitting entity (see column 4 line 47-49), sending a confirmation of receipt of the at least one of the plurality of segments from the lower data handling layer of the transmitting entity to the higher data handling layer of the transmitting entity based on the acknowledgement (see Figure 4 ACK, NACK being sent); wherein the higher data handling layer of the transmitting entity is arranged to retain the data unit until such time as an at least implied acknowledgement of receipt of earlier segments in the sequence is received from the receiving entity by the lower data handling layer of the transmitting entity (see Figure 4 where the PDU are stored until a confirmation receipt is received), "determining by the higher data handling layer of the transmitting entity that an earlier segment relative to the at least one of the plurality of segments in the sequence is not confirmed as being received by the receiving entity (see Figure 4 NACK S1,S3,S5, S8, these PDUs were not received correctly) and retransmitting, based on the determining the entire data unit via a second transmission link between the transmitting entity and the receiving entity (see S1,S3,S5 and S8 being retransmitted on the second link). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Miklos retransmission and confirmation scheme into Le et al. data layer handling transmission scheme. The method can be implemented in the PDU. The motivation of doing this ensure reliable delivery of data packets or PDU from a sender to a receiver.

For claims 2, 10, 18 and 26, Le et al. disclose all the subject matter but fails to mention wherein the higher data handling layer of the transmitting entity comprises a store for storing the data unit, and the data unit is retained in the store until the acknowledgement of receipt has been sent back, when the data unit is then removed from the store. However, Miklos from a similar field of endeavor discloses wherein the higher data handling layer of the transmitting entity comprises a store for storing the data unit (see col. 4 line 48), and the data unit is retained in the store until the acknowledgement of receipt has been sent back (see col. 4 lines 48-49), when the data unit is then removed from the store (see column 4 lines 50-59). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Miklos's storing of packets scheme into Le et al. data transmission scheme. The method can be implemented in the hardware. The motivation of doing this is to provide an error free data transmission.

For claims 3, 11, 19 and 27, Le et al. disclose all the subject matter but fails to mention wherein the lower data handling layer of the transmitting entity comprises a store for storing data pertaining to the position of each segment transmitted therefrom, wherein receiving acknowledgement further comprises receiving an indication of the respective position of the at least one of the plurality of segments. However, Miklos from a similar field of endeavor discloses wherein the lower data handling layer of the transmitting entity comprises a store for storing data pertaining to the position of each segment transmitted therefrom (see Figure 4 Store by sender related to position indicated by sequence), wherein receiving acknowledgement further

comprises receiving an indication of the respective position of the at least one of the plurality of segments (see Figure 4 receiver side which send an indication by sequence number which are not received).

For claims 4, 12, 20 and 28, Le et al. disclose all the subject matter but fails to mention determining that the transmission link is broken, when the first transmission link is broken purging store of data in the lower data handling layers of the transmitting entity and establishing the second transmission link. However, Miklos from a similar field of endeavor discloses by determining that the transmission link is broken (see Figure 1A with s1x and s2x showing broken links having the PDUs not received at the sender), when the first transmission link is broken purging store of data in the lower data handling layers of the transmitting entity and establishing the second transmission link (see figure 1A where discard and purge mechanism is shown). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include the storing and purging scheme of Miklos's into Le et al. data transmission scheme. The method can be implemented in the hardware and software. The motivation of doing this is to provide error free data transmission.

For claims 5, 13, 21 and 29, Le et al. disclose all the subject matter but fails to mention wherein the first transmission link is determined to be broken by: the transmitting entity waiting for a period of time for the acknowledgement of receipt of the at least one of the plurality of segment from the lower data handling layer of the receiving entity; repeating the waiting and the retransmitting; and deciding that the first link is broken after the waiting and the retransmitting have been repeated a number of

times. However, Miklos from a similar field of endeavor disclose wherein the first transmission link is determined to be broken (see Figure 1A, s1 and s2 shows broken link) b: the transmitting entity waiting for a period of time for the acknowledgement of receipt of the at least one of the plurality of segment from the lower data handling layer of the receiving entity (see column 6 lines 42-44); repeating the waiting and the retransmitting (see column 12 lines 20-21); and deciding that the first link is broken after the waiting and the retransmitting have been repeated a number of times (see column 6 lines 47-54, column 8 lines 40-56). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include the storing and purging scheme of Miklos's into Le et al. data transmission scheme. The method can be implemented in the hardware and software. The motivation of doing this is to provide error free data transmission.

For claims 7, 15, 23 and 31, Le et al. disclose wherein the transmitting entity is a mobile station (see column 8 lines 4-6) and the receiving entity is a serving GPRS support node in a GPRS system (see column 7 lines 19-20).

7. Claims 8, 16, 24 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Le et al. in view of Miklos as applied to claims 7, 15, 23 and 31 above, and further in view of Lohtia et al. (U.S. PGPub. No 2002/0082033 A1).

For claims 8, 16, 24 and 32, Le et al. and Miklos disclose all the subject matter but fails to mention wherein the higher data layer comprises an SNDCP layer and the lower data handling layer comprises a LLC layer. However, Lohtia et al. from a similar field of endeavor disclose wherein the higher data layer comprises an SNDCP layer

(see paragraph 36 lines 1-5) and the lower data handling layer comprises a LLC layer (see paragraph 24 lines 6-9). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Lohtia et al. layer scheme into Le et al. and Miklos transmission scheme. The method can be implemented in protocol layers. The motivation of doing this is a method of performing packet-based communication in a wireless network comprises establishing a connection over a wireless link between a mobile station and radio access network system, transmitting data in the connection, and waiting a pre-determined time delay period after end of data transmission and a procedure to release connection after the delay (see paragraph 8 lines 1-8).

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MOHAMMAD ANWAR whose telephone number is (571)270-5641. The examiner can normally be reached on Monday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derrick W. Ferris can be reached on 571-272-3123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MOHAMMAD ANWAR
Examiner
Art Unit 2416

/M. A./
Examiner, Art Unit 2416

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/Derrick W Ferris/

Supervisory Patent Examiner, Art Unit 2416